



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/875,133	06/07/2001	Koichi Kaneko	P107156-00069	7664

7590 03/12/2004

ARENT FOX KINTNER PLOTKIN & KAHN, PLLC  
Suite 600  
1050 Connecticut Avenue, N.W.  
Washington, DC 20036-5339

EXAMINER

COLON, GERMAN

ART UNIT	PAPER NUMBER
----------	--------------

2879

DATE MAILED: 03/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/875,133	<b>Applicant(s)</b> KANEKO ET AL.	
	<b>Examiner</b> German Colón	<b>Art Unit</b> 2879	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 October 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Amendment***

1. The Amendment, filed on October 09, 2003, has been entered and acknowledged by the Examiner.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 2-8 and 10-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 2 recites the limitation "the heat-generating property" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim.

Claims 3-6 and 8 are rejected over the reasons stated in claim 2, because of their dependency status from claim 2.

In regards to claim 7, claim 7 is dependent on itself. For the purpose of examination the claim was considered as dependent on claim 1.

Claim 8 recites the limitation "said another electronic *components*" in line 2. There is insufficient antecedent basis for this limitation in the claim. The Examiner notes that if the claim is amended to recite "said another electronic *component*", line 3 should be grammatically consistent.

Art Unit: 2879

In regards to claim 10, claim 10 recites the limitation "said electrode components" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 10 recites the limitation "the heat-generating property" in line 6. There is insufficient antecedent basis for this limitation in the claim.

Regarding claim 11, claim 11 is rejected over the reasons stated in the rejection of claim 10, because of its dependency status from claim 10.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-3, and 6-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Takahashi (JP 11-251772).

Regarding claim 1, Takahashi discloses a heat-dissipation structure of a PDP including a PDP 4 and a drive circuit for driving the PDP (see Figs 1-3), comprising:

a plurality of circuit boards 7a,7b,...; and

electronic components making up the drive circuit and mounted separated on said plurality of circuit boards,

wherein said plurality of circuit boards are arranged approximately in parallel to each other.

Art Unit: 2879

Regarding claim 2, Takahashi discloses an electronic component with a heat-generating property out of said electronic components making up the drive circuit being mounted on a required circuit board out of said plurality of circuit boards (see at least Fig. 3B ).

Regarding claim 3, Takahashi discloses said required circuit board being supported by a metal-made build-up frame 5 thermally-conductively installed on a metal-made casing of the PDP and being in contact with at least part of said electronic components with the heat-generating property mounted on the required circuit board (see Fig. 2).

Referring to claim 6, Takahashi discloses part of the electronic components with a heat-generating property being mounted on said required circuit board, and another electronic component with the heat-generating property being mounted on a circuit board other than said required circuit board while being in thermal-conductive contact with a metal-made casing of the PDP (see Figs. 2, 3B and 3C; and paragraphs [0005] and [0015] ).

Referring to claim 7, claim 7 is rejected over the reasons stated in the rejection of claim 6.

Referring to claim 8, the electronic component with the heat-generating property is a heat-generating module.

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 4-5 and 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi (JP 11-251772) in view of Ono (US 6,525,786).

Regarding claim 4, Takahashi discloses the claimed invention but is silent regarding the limitation of “the electronic components being mounted on both faces of the circuit board”.

However, in the same field of endeavor, Ono discloses a display having a driving-circuit and teaches to be conventional and well known in the art to mount electronic components on both sides of a circuit board (see '786, Fig. 3). Also, Takahashi teaches the desirability of placing the electronic components of the plurality of circuit boards in a position where the components do not collide with each other during assembly of the device (see JP '772, paragraph [0016] ). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to place the electronic components on both faces of the circuit board since Ono teaches to be conventional and well known in the art to mount electronic components on both sides of a circuit board, and since Takahashi teaches the desirability of placing the electronic components of the plurality of circuit boards in a position where the components do not collide with each other during assembly of the device. Further, it has been held that rearranging parts of an invention involves only routine skills in the art.

Regarding claim 5, the electronic component with the heat-generating property is a heat-generating module.

Referring to claims 9-11, claims 9-11 are rejected over the reasons stated in the rejection of claims 4-6.

***Response to Arguments***

8. Applicant's arguments with respect to claims 1-11 have been considered but are moot in view of the new ground(s) of rejection.

***Prior Art of Record***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Inubushi et al. (US 5,086,509) discloses a thermally adaptive housing for a device comprising a display and driving means for said display (see Fig. 5)

Yokota et al. (JP 2002-341777) discloses a heat-dissipation structure of a PDP which reads on at least claim 1.

***Contact Information***


Any inquiry concerning this communication or earlier communications from the examiner should be directed to German Colón whose telephone number is 571-272-2451. The examiner can normally be reached on Monday thru Thursday, from 8:30 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on 571-272-2457. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2879

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
gc

  
ASHOK PATEL  
PRIMARY EXAMINER